

## PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD7 (PHILADELPHIA RD) AND I-695 NORTHBOUND ON RAMP/GOLDEN RING ENTRANCE IN BALTIMORE COUNTY. THE EXISTING STRAIN POLES AND SPAN WIRE SHALL BE REPLACED WITH NEW MAST ARM POLES, LED SIGNAL HEADS, VIDEO DETECTION CAMERAS, COUNTDOWN PEDESTRIAN SIGNALS, AND AUDIBLE/TACTILE PEDESTRIAN PUSH BUTTONS. MD 7 IS ASSUMED TO RUN IN THE EAST-WEST DIRECTION.

## II. INTERSECTION OPERATION

1. THE INTERSECTION OPERATES IN A NEMA SIX-PHASE FULLY ACTUATED MODE WITH EXCLUSIVE-PERMISSIVE LEFT TURN PHASES FOR BOTH THE EASTBOUND AND WESTBOUND MOVEMENTS OF PHILADELPHIA RD. THE EASTBOUND AND WESTBOUND THROUGH MOVEMENTS OF PHILADELPHIA RD. OPERATE CONCURRENTLY. THE NORTHBOUND AND SOUTHBOUND MOVEMENTS OF I-695 NB ON RAMP/GOLDEN RING ENTRANCE OPERATE AS A SPLIT PHASE. AN ALTERNATE PEDESTRIAN PHASE WITH COUNTDOWN PEDESTRIAN SIGNALS AND AUDIBLE/TACTILE PEDESTRIAN PUSH BUTTONS SHALL BE INSTALLED ON THE WEST LEG OF MD 7 AND ACROSS THE I-695 NB ON RAMP.
2. A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH VIDEO INTERFACE EQUIPMENT, TELEMETRY CABLE AND ALL NECESSARY EQUIPMENT HOUSED IN A NEMA SIZE "6" BASE-MOUNTED CABINET SHALL REMAIN AT THIS INTERSECTION.

### III. APS NOTES

TO CROSS MD7:

- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME,  
THE PUSHBUTTON WILL ANNOUNCE "WAIT TO CROSS PHILADELPHIA AT I-695 NORTHBOUND RAMP AND THE CENTER AT GOLDEN RING ENTRANCE."
- B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST  
FOR THE DURATION OF THE WALK PHASE.

TO CROSS I-695 NB RAMP:

- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON WILL ANNOUNCE "WAIT TO CROSS I-695 NORTHBOUND RAMP AT PHILADELPHIA. CROSSWALK ANGLES LEFT."
- B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

## EQUIPMENT LIST

A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION

CAT. CODE	QUANTITY	DESCRIPTION
900000	1 EA	[UPDATED] VIDEO DETECTION INTERFACE EQUIPMENT: 5-8 CAMERAS
900000	53 SF	[UPDATED] SHEET ALUMINUM GROUND MOUNTED SIGN
	1 EA	SHIELD ASSEMBLY SIGN GROUND MOUNTED
	1 EA	M3-1 "NORTH" (24"x12"), M1-1 "695" (30"x24"), M6-3 "THRU ARROW" (21"x15")
	1 EA	SHIELD ASSEMBLY SIGN GROUND MOUNTED
	1 EA	M4-5a "TO" (24"x12"), M3-3 "SOUTH" (24"x12"), M1-1 "695" (30"x24"), M6-1 "LEFT ARROW" (21"x15")
	2 EA	M3-4 "WEST" (24"x12"), M1-5 "MD7" (24"x24"), M6-1 "RIGHT ARROW" (21"x15") GROUND MOUNTED
	1 EA	W11-1 "ADVANCED PEDESTRIAN CROSSING" SIGN (30"x30") AND
	1 EA	W16-7D "DIAGONAL ARROW LEFT" SIGN (24"x12")
	1 EA	R1-2 "YIELD" SIGN (36"x36")
		[UPDATED] SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGN
900000	111 SF	SHIELD ASSEMBLY SIGN (36"x75") POLE MOUNTED
	1 EA	M3-2 "EAST" (30"x15"), M1-5 "MD7" (48"x36"), M6-1 "LEFT ARROW" (30"x24")
	1 EA	M1-5(4) "MD7 WEST/EAST PHILADELPHIA RD" SIGN (78"x36") MAST ARM MOUNTED
	1 EA	D3-1 "PHILADELPHIA RD" STREET SIGN MAST ARM MOUNTED (VAR "X16")
	1 EA	R3-6 "LEFT THRU ONLY" SIGN (30"x36") MAST ARM MOUNTED
	2 EA	R3-5(1L) "LEFT ONLY" SIGN (30"x36") MAST ARM MOUNTED
	2 EA	R10-3(1) "PUSH BUTTON TO CROSS I-695 RAMP" SIGN (9"x15") POLE MOUNTED
	2 EA	R10-3(1) "PUSH BUTTON TO CROSS PHILADELPHIA RD" SIGN (9"x15") POLE MOUNTED
	2 EA	M1-5(4) (MOD) "I-695 NORTH ARROW RIGHT" SIGN (53.5"x24") MAST ARM MOUNTED
	2 EA	M1-5(4) (MOD) "I-695 NORTH ARROW LEFT" SIGN (53.5"x24") MAST ARM MOUNTED

## B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR

CAT CODE	QUANTITY	DESCRIPTION
201032	15 CY	CLASS 2 EXCAVATION
203030	3 CY	TEST PIT EXCAVATION
585462	405 LF	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH
585620	600 LF	12 INCH HEAT APPLIED WHITE PERM.-PREF. THERMOPLASTIC PAVEMENT MARKINGS
585624	105 LF	24 INCH HEAT APPLIED WHITE PERM.-PREF. THERMOPLASTIC PAVEMENT MARKINGS
585627	57 SF	WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS & SYMBOLS
600030	126 SF	DETECTABLE WARNING SURFACES FOR CURB RAMPS (RED CLAY BRICK PAVERS)
634300	270 LF	STANDARD TYPE A COMBINATION CURB AND GUTTER, 12 INCH GUTTER 8 INCH DEPTH
655105	730 SF	5 INCH CONCRETE SIDEWALK
800000	4 EA	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD SECTION
800000	2 EA	ADJUST EXISTING HANDHOLE TO GRADE
800000	195 LF	DISCONNECT, PULL BACK & REROUTE CABLE
800000	4 EA	AUDIBLE/TACTILE PEDESTRIAN PUSH BUTTON AND SIGN
800000	1 EA	FURNISH & DELIVER 2 WIRE CENTRAL CONTROL UNIT
800000	485 LF	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCH - BORED
800000	200 LF	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCH - TRENCHED
800000	164 SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN
800000	3 EA	BREAKAWAY PEDESTAL POLE (ANY SIZE)
800000	2 EA	TWIN MAST ARM POLE & 50 FOOT / 70 FOOT MAST ARMS ANY "T" DIMENSION
800000	2 EA	ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH 250 WATT HPS LAMP & LUMINAIRE
800000	6 EA	VIDEO DETECTION CAMERA & CABLE UP TO 500 FT
800000	5 EA	REMOVE SIGNAL POLE FOUNDATION 12" BELOW GRADE
801104	15 LF	WOOD SIGN SUPPORTS 4 INCH x 4 INCH
801106	80 LF	WOOD SIGN SUPPORTS 4 INCH x 6 INCH
802501	395 LF	NO.6 AWG STRANDED BARE COPPER GROUND WIRE
807202	1 EA	METERED SERVICE PEDESTAL EMBEDDED
810010	60 LF	ELECTRICAL CABLE 1-CONDUCTOR, NO.4 AWG THHN/THWN
811001	5 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
813023	6 SF	RELOCATE GROUND MOUNTED SIGN
860284	46 EA	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
860292	1 EA	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
861105	850 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
861107	940 LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
861108	2010 LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
861116	420 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG), TC

C. IF THE CABINET IS TO BE REMOVED SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

## CONTACTS

DISTRICT

MS. ERIN KUHN  
ASSISTANT DISTRICT ENGINEER - TRAFFIC  
410-321-2781

MR. DONALD SCHAEFER  
ASSISTANT DISTRICT ENGINEER - CONSTRUCTION  
410-321-2821

MR. ANDRE FUTRELL  
ASSISTANT DISTRICT ENGINEER - MAINTENANCE  
410-321-2761

MR. MICHAEL PASQUARIELLO  
ASSISTANT DISTRICT ENGINEER - UTILITIES  
410-321-2841

MR. DAVID CASTLE  
BALTIMORE GAS & ELECTRIC - ELECTRICAL SERVICE  
1-800-233-1854

## OFFICE OF TRAFFIC AND SAFETY

MR. RICHARD DAFF SR.  
CHIEF, TRAFFIC OPERATIONS  
410-787-7630

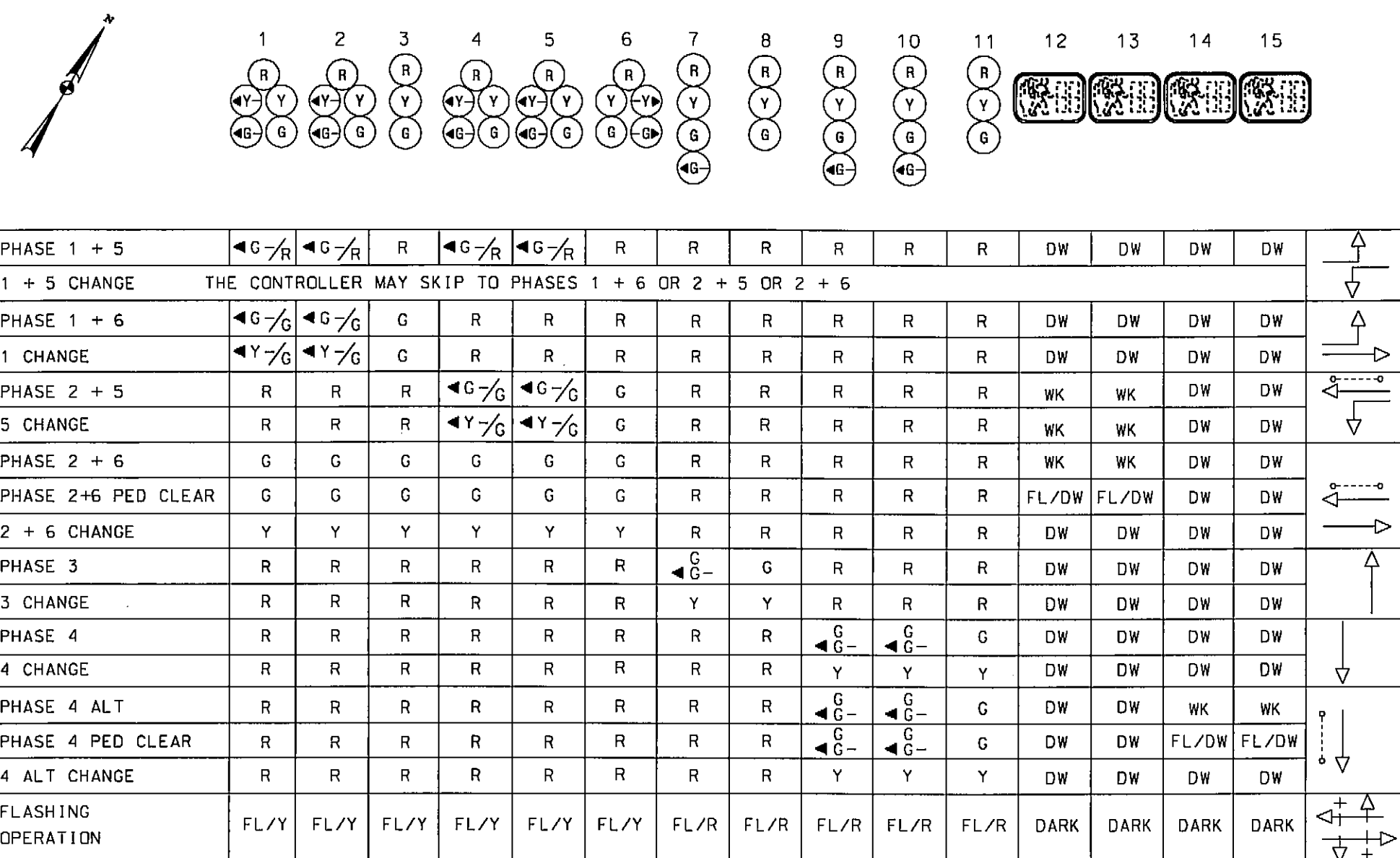
MR. ROBERT SNYDER  
ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS  
410-787-7630

MR. ED RODENHIZER  
TEAM LEADER SIGNAL OPERATIONS  
410-787-7650

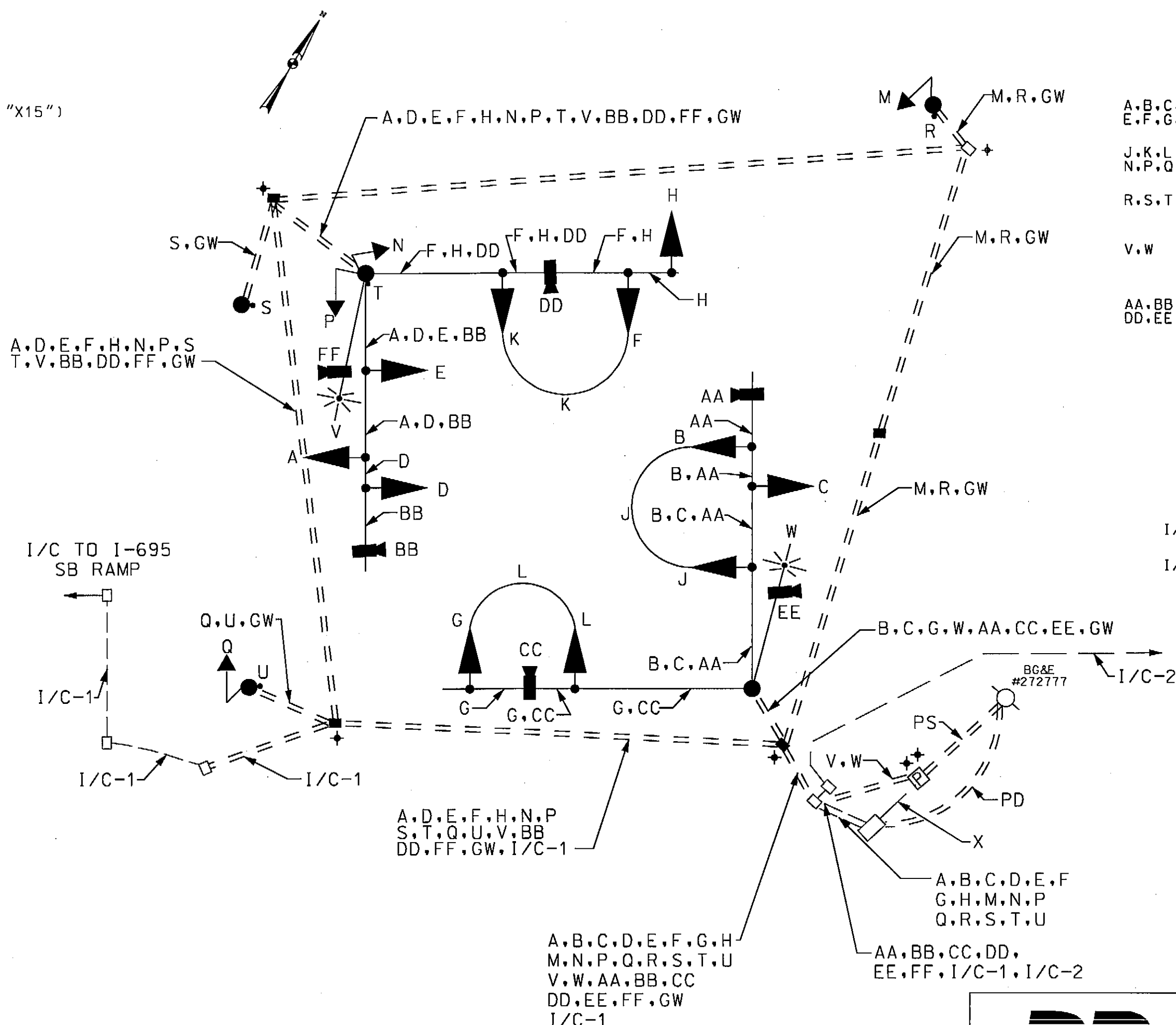
MR. EUGENE BAILEY  
TEAM LEADER SIGN OPERATIONS  
410-787-7670

MS. DARLENE EIDE  
SUPPLY OFFICER IV (SIGNAL SHOP WAREHOUSE)  
410-787-7668

### PHASE CHART



### WIRING DIAGRAM



WIRING KEY

A.B.C.D.  
E.F.G.H. - 7-CONDUCTOR ELECTRICAL  
CABLE (NO. 14 A.W.G.)

J.K.L.M  
N.P.Q - 5-CONDUCTOR ELECTRICAL  
CABLE (NO. 14 A.W.G.)

R.S.T.U - 2-CONDUCTOR ELECTRICAL  
CABLE (NO. 14 A.W.G.)

V.W - 2-CONDUCTOR TRAY  
CABLE (NO. 12 A.W.G.)

AA,BB,CC, - VIDEO DETECTION LEAD-IN  
DD,EE,FF CABLE

GW - NO.6 A.W.G STRANDED BARE COPPER GROUND WIRE

PS - PROPOSED SERVICE

PD - PHONE DROP

X - 3-1 CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G. THHN/THWN)

✦ - PROPOSED 3/4 IN. X 10 FT. GROUND ROD

✦ - EXISTING 3/4 IN. X 10 FT. GROUND ROD

I/C-1 - 12 PAIR INTERCONNECT TO I-695 SB RAMP

I/C-2 - 12 PAIR INTERCONNECT TO FONTANA LANE

# SHA

STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION

MD 7 (PHILADELPHIA RD) AND I-695 O.L. N.B.  
RAMPS /THE CENTER AT GOLDEN RING ENT.  
ROSDALE, MARYLAND

## GENERAL INFORMATION PLAN

SCALE 1" = 20' DATE 6 /1/ 09 CONTRACT NO. BA1195168

DESIGNED BY K. PERMISSOHN COUNTY BALTIMORE

DRAWN BY M. WAGNER LOGMILE 030000702.63

CHECKED BY D. MACLEAN TIMS NO. I639

FAP NO. \_\_\_\_\_ TOD NO. \_\_\_\_\_

TS NO. 1187-I GI	DRAWING	SP-18	OF	39	SHEET NO.	2	OF	2
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